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NATIONAL SECURITY COUNCIL
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MEMORANDUM FOR

FROM: 25X1A

SUBJECT: Analysis R&D and Training

To follow up on our luncheon discussion on Thursday, 20 July, I
would like to expand on some of the points we covered. My concern
has been that the response thus far to the President's memorandum
of 5 November 1971 has not included a more positive set of measures
to move toward at least the definition of a comprehensive program of
product improvement. The tendency has been to interpret the tasking
of the DCI to formulate such a program as being covered by the current
activities of the NSCIC Working Group in the area of product review.
No doubt the Working Group will generate some ideas for product
improvement. But their work will not produce a comprehensive pro-
gram. Piecemeal change of current processes or of individual products
does not constitute the whole of a product improvement program.

Of course any list of potential elements of a comprehensive program
would require further study and validation, but let me suggest some
candidates. They would include programs to provide more training
to intelligence analysts and R&D programs on new methods of intelli-
gence analysis. The career systems and other incentive systems
that affect analysts and influence the length of time he stays in his
role as analyst is another possible progam area. Quality control
operations conducted by independent offices of review and product
assessment within producing agencies is another possibility. While
the intelligence community is faced with a problem of extracting
sufficient feedback from consumers, it is also true that it does not
have an active and aggressive effort to study consumer needs.

But I really want to focus most attention on two areas: training and R&D
on intelligence analysis. Given the kind of organization, the kind of
career system that the CIA has, training programs are extremely
important. Other intelligence organizations are not too different.

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Analysts tend to enter at the bottom of the career ladder and
progress up it--there is very little lateral entry--and moreover
in the near term recruitment difficulties may prevent the organization
from hiring the absolutely best people around. I would hope that
situation is not going to persist, but it may be with us for a while.
All of these characteristics of the organization, of the career system,
make it imperative that it utilize the talents of the people that do
come into the system to their utmost. This suggests that training,
specifically in this context training in intelligence analysis, may
be an especially important way of trying to improve intelligence products.
Moreover, I think there are several new areas of knowledge that have
been developed in the last few years that are clearly at the center of
the intelligence analysis problem; in particular, the fields of decision-
making in small groups, in large organizations, and the use of
Bayesian statistical techniques--both in the analysis of data and
in the communication of uncertainty levels.

In any case, graduation from college does not necessarily make a man
an analyst, and there is always room to teach him more rigorous
approaches to examining problems by giving him additional skills
that allow him to do his work better. This can be done without
instituting whole new programs of instructions, through such vehicles
as seminars, recommended reading lists and blocks of instructions
inserted in programs already presented. In any case, I feel training
is a very important factor in the quality of analysis, although it may
not now be viewed as such by the community, perhaps partly because
it may be a tendency to see analysis as some sort of intuitive process.
Much of the analysis seems to be currently transmitted by an
apprenticeship system. I think formal training might help analysts
to do a much better job.

New, expanded programs of training should be examined for the contri-
butions they might make in a comprehensive program of product
improvement. The inevitable resource issues that such programs
would raise should be considered at IRAC and in other appropriate
forums. We need a community-wide strategy and program to work
toward product improvement.

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The second major area that I especially favor is that of a research and development effort in analysis techniques. For one thing analysts rely on individual-constructed frameworks, from which they view the world. Yet there are often other frameworks which can be helpful in improving their analysis. I mentioned a couple earlier--the area of organizational behavior and new statistical methods of analysis. What is needed is an on-going effort to explore these and any other approaches that seem worthy of exploration. Above all, the goal of an R&D program should be to put these techniques in a usable form for the analysts. For example, the possession of an ADP operation, canned programs and statisticians is a step in the right direction. But what is needed is to put these tools in forms usable by people without special training in mathematics or computers.

I recently had a briefing from some contractor people doing work in the application of Bayesian techniques. They have developed training methods that allow analysts who cannot understand the mathematics to perform their role as sources of expert judgment in a particular area and externalize their insights as to the probability of various events happening more effectively. Also many aids have been developed to allow analysts to indicate the additional amount by which the probability estimate of event is shifted as the result of a new bit of information added to that already available.

Parenthetically, I think that it would be an excellent idea to have some psychologists study the inference processes of intelligence analysts in particular problem areas in order to understand the role of: data, the assumptions they bring to the problem, the general analytic frameworks they use, heuristic devices they use, etc. I believe that such an analysis would show that the framework of analysis, the assumptions the analysts bring to the problem regarding the nature of governments, their typical decisions processes, the nature of human beings, etc. are a lot more important to the answer than specific pieces of data available. In typical intelligence problems the data is always pretty skimpy. A study of the inference processes might give us some additional insights into what kind of additional data is likely to be useful, given the existing inference processes, as well as telling us something about where we might profitably invest resources in training analysts. Perhaps we could discover the inference processes of good analysts and see how they differ from those of poor and mediocre analysts. To what extent could training the poor analyst get them to use superior inference processes and superior assumptions?

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These are just a few ideas to flesh out two areas of what I think a
program of product improvement might consist of. There are
undoubtedly additional ideas around. What troubles me is that no
one in the community sees it as his job to really try to put together
a positive program designed to improve products through improved
inputs of key factors; people, their training, innovation in intelligence
analysis, etc. The implications for the community and its component
organizations would be substantial. There are clearly numerous
resource issues and tough tradeoff problems. Let's talk about
all this the next time we meet.

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